

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Aquatic Resources
Honolulu, Hawaii 96813

April 19, 2010

Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Resubmittal of Request for Authorization and Approval to Issue a Papahānaumokuākea Marine
National Monument Research Permit to Whitlow Au, University of Hawaii, Hawaii Institute of
Marine Biology, for Access to State Waters to Deploy and Service Ecological Acoustic
Recorders (EARs)

The Division of Aquatic Resources (DAR) hereby submits a request for your authorization and approval for issuance of a Papahānaumokuākea Marine National Monument research permit to Whitlow Au, researcher, University of Hawaii, Hawaii Institute of Marine Biology, pursuant to § 187A-6, Hawaii Revised Statutes (HRS), chapter 13-60.5, Hawaii Administrative Rules (HAR), and all other applicable laws and regulations.

The research permit, as described below, would allow entry and research activities to occur in Papahānaumokuākea Marine National Monument (Monument), including the NWHI State Marine Refuge and the waters (0-3 nautical miles) surrounding the following sites:

- Nihoa Island
- French Frigate Shoals
- Maro Reef
- Lisianski Island, Neva Shoal
- Pearl and Hermes Atoll
- Kure Atoll State Seabird Sanctuary

The Department has made an exemption determination for this permit in accordance chapter 343, HRS, and Chapter 11-200, HAR. See Attachment (“DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200 HAR, FOR PAPAHAANAUMOKUĀKEA MARINE NATIONAL MONUMENT RESEARCH PERMIT TO WHITLOW AU, UNIVERSITY OF HAWAII, HAWAII INSTITUTE OF MARINE BIOLOGY, FOR ACCESS TO STATE WATERS TO DEPLOY AND SERVICE ECOLOGICAL ACOUSTIC RECORDERS (EARs) UNDER PERMIT PMNM-2010-034”).

The activities covered under this permit would occur between May 1, 2010 and June 30, 2010.

INTENDED ACTIVITIES:

The purpose of these activities is the deployment of four deep water EARs (Ecological Acoustic Recorders) for the purpose of detecting baleen whales in Monument waters. In addition, the applicant requests to refurbish eight shallow water EARs that are currently stationed in the Monument.

Each activity would be carried out in the following manner:

- Deep water deployments – The ship's J or A-frame would lift the deep EAR package over the side of the ship and then release the entire package and let it free drop to the bottom. The EARs would be moored on the bottom at approximately 400 m depth.
- Shallow water refurbishments - Divers would separate the EAR from the bottom anchor (concrete block) and bring it to the surface. The old battery packs and dish drive would be removed swapped with new ones. The refurbished unit would be taken down and re-attached to the bottom anchor.

The items used with each EAR are a syntatic foam collar on the EAR, an acoustic release, a garage post concrete block, and two sandbags. The EARs record acoustic signals on a duty cycle. The acoustic signals are then used to determine the type of organisms that produce the sounds. In that way, the distribution of different organisms, their acoustic behavior on a 24 hour basis, and their relative abundance can be determined. The shallow EARs have been successful in detecting different species of dolphins, humpback whales, different species of fish. The EARs are also collecting long-term data on the level of snapping shrimp sounds throughout the Monument. In addition, they are capable of recording boat sounds from vessels that enter the Monument.

The applicant would collaborate with HIMB permittee Carl Meyer and his team on the refurbishment of the shallow water EARs.

This research would help determine the distribution of baleen whales in deep waters of the Monument, as well as continue to collect data on the acoustic environment of coral reefs in shallow water.

The activities proposed by the applicant directly support the Monument Management Plan's priority management needs 3.1 – Understanding and Interpreting the NWHI (through action plan 3.1.1 – Marine Conservation Science).

The activities described above may require the following regulated activities to occur in State waters:

- ☒ Drilling into, dredging, or otherwise altering the submerged lands other than by anchoring a vessel; or constructing, placing, or abandoning any structure, material, other matter on the submerged lands
- ☒ Swimming, snorkeling, or closed or open circuit SCUBA diving within any Special Preservation Area or Midway Atoll Special Management Area

REVIEW PROCESS:

The permit application was sent out for review and comment to the following scientific and cultural entities: Hawaii Division of Aquatic Resources, Hawaii Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Hawaiian and Pacific Islands National Wildlife Refuge Complex Office, and the Office of Hawaiian Affairs (OHA). In addition, the permit application has been posted on the Monument Web site since March 15th, giving the public an opportunity to comment. The application was posted within 40 days of its receipt, in accordance with the Monument's Public Notification Policy.

Comments received from the scientific community are summarized as follows:

Scientific reviews support the acceptance of this application.

Concerns raised:

1. The Applicant states that "divers" would be needed to refurbish shallow EARs. However, only one person is listed in the personnel section. Who else would be conducting work under this permit?
2. What are the qualifications of the field PI, Anne Rosinski?
3. Please clarify where the deep EARs would be placed. What types of habitat would the deep EARs be deployed on?

Comments received from the Native Hawaiian community are summarized as follows:

Cultural reviews support the acceptance of this application. No concerns were raised.

Comments received from the public are summarized as follows:

No comments were received from the public on this application.

Additional reviews and permit history:

Are there other relevant/necessary permits or environmental reviews that have or will be issued with regard to this project? (e.g. MMPA, ESA, EA) Yes ☒ No ☐

If so, please list or explain:

- The proposed activities are in compliance with the National Environmental Policy Act.
- The proposed activities are in compliance with HRS Chapter 343 (exemption class HAR §11-200-8(a)(5)).

Has Applicant been granted a permit from the State in the past? Yes ☐ No ☒

If so, please summarize past permits:

Have there been any a) violations: Yes ☐ No ☒
b) Late/incomplete post-activity reports: Yes ☐ No ☒

Are there any other relevant concerns from previous permits? Yes ☐ No ☒

RESPONSE:

1. The Applicant states that Carl Meyer and his team would be responsible for recovering and re-deploying all existing shallow EARs. Anne Rosinski would be the technical EAR expert onboard the cruise. Her responsibilities would be to ensure that Meyer has replacement EARs ready for each recovery/replacement dive. She would refurbish recovered EARs and prepare them for re-deployment at the subsequent recovery site. She would also be responsible for the deployment of the four deep water EARs, which will require coordination with the ship's deck crew and bridge personnel.
2. The Applicant reports that Anne Rosinski is a bioacoustic technician at HIMB. She holds a B.S. in Environmental Science from the University of Michigan. She has been working with EAR data for the past 9 months and has been trained in the assembly and refurbishment of EAR hardware. She has participated on several missions in the MHI to recover and refurbish EARs.
3. The Applicant states that the deep EARs would be placed on flat and ideally soft (e.g. sandy bottomed) substrate. The primary objective of the deep EARs is to listen for cetaceans and transiting vessels, so it is important that the EARs have an unobstructed acoustic field. The exact deployment sites of the EARs would be determined after the general location has been surveyed using the ship's echosounder to establish the characteristics of the local bathymetry. The deep EARs would be deployed in the location with the lowest rugosity and lowest available slope angle.

STAFF OPINION:

DAR staff is of the opinion that Applicant has properly demonstrated valid justifications for his application and should be allowed to enter the NWHI State waters and to conduct the activities therein as specified in the application with certain special instructions and conditions, which are in addition to the Papahānaumokuākea Marine National Monument Research Permit General Conditions. All suggested special conditions have been vetted through the legal counsel of the Co-Trustee agencies (see Recommendation section).

MONUMENT MANAGEMENT BOARD OPINION:

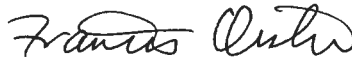
The MMB is of the opinion that the Applicant has met the findings of Presidential Proclamation 8031 and this activity may be conducted subject to completion of all compliance requirements. The MMB concurs with the special conditions recommended by DAR staff.

RECOMMENDATION:

That the Board authorize and approve a Research Permit to Whitlow Au, University of Hawaii, Hawaii Institute of Marine Biology, with the following special conditions:

1. To prevent introduction of disease or the unintended transport of live organisms, the permittee must comply with the disease and transport protocol attached to this permit.
2. Tenders and small vessels must be equipped with engines that meet EPA emissions requirements.
3. Refueling of tenders and all small vessels must be done at the support ships and outside the confines of lagoons or near-shore waters in the State Marine Refuge
4. No fishing is allowed in State Waters except as authorized under State law for subsistence, traditional and customary practices by Native Hawaiians.

Respectfully submitted,



 Administrator

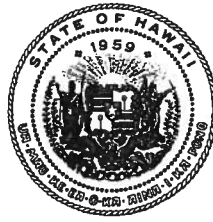
APPROVED FOR SUBMITTAL



LAURA H. THIELEN
Chairperson

Attachment

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF AQUATIC RESOURCES
1151 PUNCHBOWL STREET, ROOM 330
HONOLULU, HAWAII 96813

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

RUSSELL TSUJI
DEPUTY DIRECTOR - LAND

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

April 6, 2010

TO: Division of Aquatic Resources File

THROUGH: Laura H. Thielen, Chairperson

FROM: Francis Oishi, Program Manager
Division of Aquatic Resources

A handwritten signature in black ink, appearing to be "FO", is written over the name "Francis Oishi".

SUBJECT:

DECLARATION OF EXEMPTION FROM THE PREPARATION OF AN ENVIRONMENTAL ASSESSMENT
UNDER THE AUTHORITY OF CHAPTER 343, HRS AND CHAPTER 11-200 HAR, FOR
PAPAHĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT RESEARCH PERMIT TO WHITLOW AU,
UNIVERSITY OF HAWAII, HAWAII INSTITUTE OF MARINE BIOLOGY, FOR ACCESS TO STATE WATERS
TO DEPLOY AND SERVICE ECOLOGICAL ACOUSTIC RECORDERS (EARS)
UNDER PERMIT PMNM-2010-034.

The following permitted activities are found to be exempted from preparation of an environmental assessment under the authority of Chapter 343, HRS and Chapter 11-200, HAR:

Project Title:

Papahānaumokuākea Marine National Monument Research Permit to Whitlow Au, University of Hawaii, Hawaii Institute of Marine Biology, for Access to State Waters to Deploy and Service Ecological Acoustic Recorders (EARS).

Permit Number: PMNM-2010-034.

Project Description:

The research permit application, as described below, would allow entry and activities to occur in Papahānaumokuākea Marine National Monument (Monument), including the NWHI State waters from May 1, 2010 through June 30, 2010.

This project is to deploy four deep water EARS (Ecological Acoustic Recorders) for the purpose of detecting baleen whales in Monument waters. In addition, the permittee would refurbish eight shallow water EARS that are currently stationed in the Monument. The deep water EARS would be dropped from a ship to the seafloor after a suitable bottom type (flat and sandy) is located. The shallow water EARS are refurbished by SCUBA divers who will replace the old battery packs and disc drives with new ones. This research would help determine the distribution of baleen whales in deep waters of the Monument, as well as continue to collect data on the acoustic environment of coral reefs in shallow water.

April 6, 2010

The proposed activities are in direct support of the Monument Management Plan's priority management need 3.2 – Conserving Wildlife and Habitat (through action plan 3.2.1 – Threatened and Endangered Species). This action plan specifies to "census cetacean populations." Activities to support conserving wildlife and habitat, as well as understanding and interpreting the NWHI, which could include acoustic monitoring and marine mammal detection, are addressed in the Monument Management Plan Environmental Assessment (December 2008) which resulted in a FONSI. This EA summarizes that understanding how populations change could be helpful to forecast, prepare for and mediate potential threats to populations within the Monument (PMNM MMP Vol. 2, p.171). Efforts to monitor cetacean population, such as those proposed, would enhance this understanding.

Consulted Parties:

The permit application was sent out for review and comment to the following scientific and cultural entities: Hawaii Division of Aquatic Resources, Hawaii Division of Forestry and Wildlife, Papahānaumokuākea Marine National Monument (NOAA/NOS), NOAA Pacific Islands Regional Office (NOAA-PIRO), United States Fish and Wildlife Service Hawaiian and Pacific Islands National Wildlife Refuge Complex Office, and the Office of Hawaiian Affairs (OHA). The Principal Investigator for this project, Whitlow Au, has also been consulted with respect to his specific plans for deployment and recovery of EARs. In addition, the permit application has been posted on the Monument Web site since March 15th, giving the public an opportunity to comment. The application was posted within 40 days of its receipt, in accordance with the Monument's Public Notification Policy.

Exemption Determination:

After reviewing HAR § 11-200-8, including the criteria used to determine significance under HAR § 11-200-12, DLNR has concluded that the activities under this permit would have minimal or no significant effect on the environment and that issuance of the permit is categorically exempt from the requirement to prepare an environmental assessment based on the following analysis:

1. All activities associated with this permit have been evaluated as a single action. Since this permit involves an activity that is precedent to a later planned activity, i.e. the subsequent recovery and refurbishment of deployed EARs, the categorical exemption determination here will treat all planned activities as a single action under § 11-200-7, HAR.

2. The Exemption Class for Scientific Research with no Serious or Major Environmental Disturbance Appears to Apply. HAR § 11-200-8A.5. exempts the class of actions which involve "basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource." This exemption class has been interpreted to include acoustic monitoring and tracking of animals such as those being proposed.

In addition, the Exemption Class #5, Exempt Items #3, #4, and #5, respectively, include "placing recording devices in the field to determine animal movement," as well as "wildlife and game surveys, censuses, inventories, studies..." and "... marine surveys and research activities..." Department of Land and Natural Resources, Exemption List for the Division of Fish and Game, approved January 19, 1976.

April 6, 2010

The proposed acoustic monitoring activities here appear to fall squarely under the exemption class identified under HAR § 11-200-8.A.5. and as described under the 1976 exemption list classes. As discussed below, no significant disturbance to any environmental resource is anticipated in either the deployment or recovery of EARs. Thus, so long as the below considerations are met, an exemption class should include the action now contemplated.

3. Cumulative Impacts of Actions in the Same Place and Impacts with Respect to the Potentially Particularly Sensitive Environment Will Not be Significant. Even where a categorical exemption appears to include a proposed action, the action cannot be declared exempt if “the cumulative impact of planned successive actions in the same place, over time, is significant, or when an action that is normally insignificant in its impact on the environment may be significant in a particularly sensitive environment.” HAR § 11-200-8.B. To gauge whether a significant impact or effect is probable, an exempting agency must consider every phase of a proposed action, any expected primary and secondary consequences, the long-term and short-term effects of the action, the overall and cumulative effect of the action, and the sum effects of an action on the quality of the environment. HAR § 11-200-12.

EARs have been successfully deployed in the Monument for several years, but this would be the first attempt to use EARs at much deeper depths of about 500 m. These deeper deployments would offer a unique perspective on the occurrence of animals such as blue whales, fin whales, sei whales, minke whales and humpback whales. Significant cumulative impacts are not anticipated as a result of this activity, and numerous safeguards further ensure that the potentially sensitive environment of the project area will not be significantly affected. All activities will be conducted in a manner compatible with the management direction of the Monument Proclamation in that the activities do not diminish monument resources, qualities, and ecological integrity, or have any indirect, secondary, cultural, or cumulative effects. The joint permit review process did not reveal any anticipated indirect or cumulative impacts, nor did it raise any cultural concerns, that would occur as a result of these activities.

Since no significant cumulative impacts or significant impacts with respect to any particularly sensitive aspect of the project area are anticipated, the categorical exemptions identified above should remain applicable.

4. Overall Impacts will Probably be Minimal and Insignificant. Any foreseeable impacts from the proposed activity will probably be minimal, and further mitigated by general and specific conditions attached to the permit. Specifically, all research activities covered by this permit will be carried out with strict safeguards for the natural, historic, and cultural resources of the Monument as required by Presidential Proclamation 8031, other applicable law and agency policies and standard operating procedures. This project has been subject to the public review process for several years, as the applicant has been in a collaborative relationship with other permit holders who have been allowed to deploy and recover shallow water EARs in the Monument. These collaborators include HIMB’s Dr. Carl Meyer and Dr. Russell Brainard of NOAA’s Pacific Island Fisheries Science Center who were in fact permitted to conduct many of the same activities over the past three years.

Conclusion. Upon consideration of the permit to be approved by the Board of Land and Natural Resources, the potential effects of the above listed project as provided by Chapter 343, HRS and Chapter 11-200, HAR, have been determined to be of probable minimal or no significant effect on the environment and exempt from the preparation of an environmental assessment.

April 6, 2010

Laura H. Thielen
Chairperson, Board of Land and Natural Resources

Date

Papahānaumokuākea Marine National Monument
RESEARCH Permit Application

NOTE: This Permit Application (and associated Instructions) are to propose activities to be conducted in the Papahānaumokuākea Marine National Monument. The Co-Trustees are required to determine that issuing the requested permit is compatible with the findings of Presidential Proclamation 8031. Within this Application, provide all information that you believe will assist the Co-Trustees in determining how your proposed activities are compatible with the conservation and management of the natural, historic, and cultural resources of the Papahānaumokuākea Marine National Monument (Monument).

ADDITIONAL IMPORTANT INFORMATION:

- Any or all of the information within this application may be posted to the Monument website informing the public on projects proposed to occur in the Monument.
- In addition to the permit application, the Applicant must either download the Monument Compliance Information Sheet from the Monument website OR request a hard copy from the Monument Permit Coordinator (contact information below). The Monument Compliance Information Sheet must be submitted to the Monument Permit Coordinator after initial application consultation.
- Issuance of a Monument permit is dependent upon the completion and review of the application and Compliance Information Sheet.

INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED

Send Permit Applications to:

Papahānaumokuākea Marine National Monument Permit Coordinator

6600 Kalaniana'ole Hwy. # 300

Honolulu, HI 96825

nwhipermit@noaa.gov

PHONE: (808) 397-2660 FAX: (808) 397-2662

SUBMITTAL VIA ELECTRONIC MAIL IS PREFERRED BUT NOT REQUIRED. FOR ADDITIONAL SUBMITTAL INSTRUCTIONS, SEE THE LAST PAGE.

Papahānaumokuākea Marine National Monument Permit Application Cover Sheet

This Permit Application Cover Sheet is intended to provide summary information and status to the public on permit applications for activities proposed to be conducted in the Papahānaumokuākea Marine National Monument. While a permit application has been received, it has not been fully reviewed nor approved by the Monument Management Board to date. The Monument permit process also ensures that all environmental reviews are conducted prior to the issuance of a Monument permit.

Summary Information

Applicant Name: Whitlow Au

Affiliation: Hawaii Institute of Marine Biology

Permit Category: Research

Proposed Activity Dates: May 10 - June 3, 2010

Proposed Method of Entry (Vessel/Plane): NOAA ship Hi'ialakai

Proposed Locations: For Deep EARs deployment

Kure Atoll:	N28 deg 20.000'	W178 deg 13.000'
Lisianski -Pioneer Bank	N26 deg 2.000'	W173 deg 32.000'
French FS-Brooks Bank	N23 deg 55.000'	W166 deg 42,.000'
Nihoa	N22 deg 54.000'	W162 deg 12.000'

For Shallow EARs to be refurbished

Pearl and Hermes Atoll2	N27.94057	W175.86171
Maro Reef	N25.41957	W170.66913
Lisiansky	N26.10010	W173.99798
KUR-Kure Atoll	N28.38171	W178.32571
MID-Midway Atoll	N28.19637	W177.37495
French Frigate Shoals2	N23.63507	W166.18554
French Frigate Shoals3	N23.76887	W166.26197
Pearl and Hermes Atoll1	N27.79096	W175.86298

Estimated number of individuals (including Applicant) to be covered under this permit:

1

Estimated number of days in the Monument: 24

Description of proposed activities: (complete these sentences):

a.) The proposed activity would...

Involve deployment of four deep EARs (Ecological Acoustic Recorders) to be moored on the bottom at approximately 400 m depth for the purpose of detecting baleen whales in Monument

waters. The items used with each EAR is a syntatic foam collar on the EAR, an acoustic release, a garage post concrete block and two sandbags.

We will also be refurbishing 8 EARs that have been deployed in shallow waters. These EARs have been collecting acoustic data on the acoustic environment of the coral reef areas in the Monument. These shallow EARs have been successful in detecting different species of dolphins, humpback whales, different species of fish. The EARs are also collecting long-term data on the level of snapping shrimp sounds throughout the Monument.

b.) To accomplish this activity we would
need a J-frame or A-frame to lift the mooring anchor (cement block and sandbag), the acoustic release and deep EAR package along with flotation form, over the side of the ship and then release the entire package and let it free dropped to the bottom.

In order to refurbish the 8 shallow EARs, divers would be need to separate the EAR from the bottom anchor (concrete block) and brought to the surface. The old battery packs will be replaced by new battery packs and the dish drive will be swapped with new ones. Then the refurbished unit will be taken down and attached to the bottom anchor.

c.) This activity would help the Monument by ...
determining the distribution of baleen whales in deep waters of the Monument using the four new deep EARs. The refurbished shallow EARs will continue to collect data on the acoustic environment of coral reefs.

Other information or background: Humpback whales have been found to migrate to the Monument from unknown locations in high latitudes. Other baleen whales are probably also present in the Monument. Its important to understand what baleen whales are present, when they are present and where in the Monument they are present. This type of information is important in terms of management of the Monument.

Section A - Applicant Information

1. Applicant

Name (last, first, middle initial): Au, Whitlow, W. L.

Title: Researcher

1a. Intended field Principal Investigator (See instructions for more information):
Anne Rosinski

2. Mailing address (street/P.O. box, city, state, country, zip):

[REDACTED]

Phone:

[REDACTED]

Fax:

[REDACTED]

Email:

[REDACTED]

For students, major professor's name, telephone and email address: Whitlow Au

3. Affiliation (institution/agency/organization directly related to the proposed project):
Hawaii Institute of Marine Biology

4. Additional persons to be covered by permit. List all personnel roles and names (if known at time of application) here (e.g. John Doe, Research Diver; Jane Doe, Field Technician):

Anne Rosinski, Field Technician, deployment of deep EARs.

Section B: Project Information

5a. Project location(s):

<input checked="" type="checkbox"/> Nihoa Island	<input type="checkbox"/> Land-based	<input type="checkbox"/> Shallow water	<input checked="" type="checkbox"/> Deep water
<input type="checkbox"/> Necker Island (Mokumanamana)	<input type="checkbox"/> Land-based	<input type="checkbox"/> Shallow water	<input type="checkbox"/> Deep water
<input checked="" type="checkbox"/> French Frigate Shoals	<input type="checkbox"/> Land-based	<input checked="" type="checkbox"/> Shallow water	<input checked="" type="checkbox"/> Deep water
<input type="checkbox"/> Gardner Pinnacles	<input type="checkbox"/> Land-based	<input checked="" type="checkbox"/> Shallow water	<input type="checkbox"/> Deep water
<input checked="" type="checkbox"/> Maro Reef			
<input type="checkbox"/> Laysan Island	<input type="checkbox"/> Land-based	<input type="checkbox"/> Shallow water	<input type="checkbox"/> Deep water
<input checked="" type="checkbox"/> Lisianski Island, Neva Shoal	<input type="checkbox"/> Land-based	<input checked="" type="checkbox"/> Shallow water	<input checked="" type="checkbox"/> Deep water
<input checked="" type="checkbox"/> Pearl and Hermes Atoll	<input type="checkbox"/> Land-based	<input checked="" type="checkbox"/> Shallow water	<input type="checkbox"/> Deep water
<input checked="" type="checkbox"/> Midway Atoll	<input type="checkbox"/> Land-based	<input checked="" type="checkbox"/> Shallow water	<input checked="" type="checkbox"/> Deep water
<input checked="" type="checkbox"/> Kure Atoll	<input type="checkbox"/> Land-based	<input checked="" type="checkbox"/> Shallow water	<input type="checkbox"/> Deep water
<input type="checkbox"/> Other			

NOTE: There is a fee schedule for people visiting Midway Atoll National Wildlife Refuge via vessel and aircraft.

Location Description:

For Deep Ears to be deployed:

Kure Atoll:	N28 deg 20.000'	W178 deg 13.000'
Lisianski -Pioneer Bank	N26 deg 2.000'	W173 deg 32.000'
French FS-Brooks Bank	N23 deg 55.000'	W166 deg 42.000'
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For Shallow EARs to be refurbished

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MID-Midway Atoll	N28.19637	W177.37495
French Frigate Shoals2	N23.63507	W166.18554
French Frigate Shoals3	N23.76887	W166.26197
Pearl and Hermes Atoll1	N27.79096	W175.86298

5b. Check all applicable regulated activities proposed to be conducted in the Monument:

- ☐ Removing, moving, taking, harvesting, possessing, injuring, disturbing, or damaging any living or nonliving Monument resource
- ☐ Drilling into, dredging, or otherwise altering the submerged lands other than by anchoring a vessel; or constructing, placing, or abandoning any structure, material, or other matter on the submerged lands

- ☐ Anchoring a vessel
- ☐ Deserting a vessel aground, at anchor, or adrift
- ☐ Discharging or depositing any material or matter into the Monument
- ☐ Touching coral, living or dead
- ☐ Possessing fishing gear except when stowed and not available for immediate use during passage without interruption through the Monument
- ☐ Attracting any living Monument resource
- ☐ Sustenance fishing (Federal waters only, outside of Special Preservation Areas, Ecological Reserves and Special Management Areas)
- ☐ Subsistence fishing (State waters only)
- ☒ Swimming, snorkeling, or closed or open circuit SCUBA diving within any Special Preservation Area or Midway Atoll Special Management Area

6 Purpose/Need/Scope *State purpose of proposed activities:*

To deploy 4 deep EARs at about 400 m depth to detect the presence of baleen whales. To refurbished 8 shallow EARs with new batteries and new laptop disk drives. The EARs record acoustic signals on a duty cycle. The acoustic signals are then used to determine the type of organisms that produce the sounds. In that way, we can obtain the distribution of different organisms, their acoustic behavior on a 24 hour basis, and their relative abundance.

7. Answer the Findings below by providing information that you believe will assist the Co-Trustees in determining how your proposed activities are compatible with the conservation and management of the natural, historic, and cultural resources of the Monument:

The Findings are as follows:

a. How can the activity be conducted with adequate safeguards for the cultural, natural and historic resources and ecological integrity of the Monument?

We will be deploying deep water sensors and will not be collecting any samples except acoustic data. We will also be refurbishing 8 shallow EARs. Therefore, no cultural, natural and historic resources and ecological integrity of the Monumnet will be jeopardized by our activities.

b. How will the activity be conducted in a manner compatible with the management direction of this proclamation, considering the extent to which the conduct of the activity may diminish or enhance Monument cultural, natural and historic resources, qualities, and ecological integrity, any indirect, secondary, or cumulative effects of the activity, and the duration of such effects? The deployment of the four deep EARs and the refurbishing of the 8 shallow EARs are totally compatible with management direction and will not jeopardized any of the Monument cultural, natural and historic resources qualities and ecological integrity.

c. Is there a practicable alternative to conducting the activity within the Monument? If not, explain why your activities must be conducted in the Monument.

If we want to determine the presence of different organisms within the Monuments on a long-term basis using acoustics then our recording devices need to be within the Monument.

d. How does the end value of the activity outweigh its adverse impacts on Monument cultural, natural and historic resources, qualities, and ecological integrity?

There will not be any adverse impact on the Monument so our activities should be considered as harmless.

e. Explain how the duration of the activity is no longer than necessary to achieve its stated purpose.

The deployment of the Deep EAR should only take approximately 30 min to 1 hour and there no reasons for us to stay in the location.

The refurbishing of the shallow water EAR will require diving to retrieve the EAR and replace the EAR. There are no reasons to remain in the area.

f. Provide information demonstrating that you are qualified to conduct and complete the activity and mitigate any potential impacts resulting from its conduct.

PI Whitlow Au has over 30 years of bioacoustic experience, is presently the president of the Acoustical Society of America, has published 3 books concerning marine bioacoustics, edited 2 books and has approximately 180 publications in peer reviewed journals.

g. Provide information demonstrating that you have adequate financial resources available to conduct and complete the activity and mitigate any potential impacts resulting from its conduct. The field-based component of this project is supported by a 25 day allocation of ship time (5/3/10 - 6/3/10), a 30 day allocation of ship time (7/21/10 - 8/19/10) on the NOAA research vessel Hiialakai, a line item in the budget of the Monument. Subsequent lab-based research is supported by HIMB-NWHI Coral Reef Research Partnership (NMSP MOA 2005-008/66882).

h. Explain how your methods and procedures are appropriate to achieve the proposed activity's goals in relation to their impacts to Monument cultural, natural and historic resources, qualities, and ecological integrity.

The method we are applying, that is to record acoustic signals in different depth regime thorough the Monument will allow us to determine what higher tropic organisms, such as fish, dolphins and whales that inhabit the waters of the Monument. This type of inforamtion is part of the cultural, natural and historical resources and the techniques will not affect the quality and ecological integrity of the Monument.

i. Has your vessel has been outfitted with a mobile transceiver unit approved by OLE and complies with the requirements of Presidential Proclamation 8031?

Yes

j. Demonstrate that there are no other factors that would make the issuance of a permit for the activity inappropriate.

This is a continuation of research efforts that have been conducted for three years and through the entire history of the Monument. During these previous efforts, there have been no problems with permit violations by my research team, no safety issues, and no complaints of offensive behavior. In these circumstances there are no other factors that would make the issuance of the permit inappropriate.

8. Procedures/Methods:

The procedures and methods are rather simple. They consist of deploying underwater ecological acoustic recorders (EAR) in different locations and depths throughout the monument. These recorders work on a duty cycle (on and off periods) and can collect data through out a year of a daily basis. The data are subsequently analyzed with computer base alogirthms that will allow us to collect long-term acoustic data on the acoustic environment of the Monument and to identify various sound producing higer tropic organisms such as fish, dolphins and whales. We are also capable of recording boat sounds from vessels that enter the monument.

NOTE: If land or marine archeological activities are involved, contact the Monument Permit Coordinator at the address on the general application form before proceeding, as a customized application will be needed. For more information, contact the Monument office on the first page of this application.

9a. Collection of specimens - collecting activities (would apply to any activity): organisms or objects (List of species, if applicable, attach additional sheets if necessary):

Common name:

N/A

Scientific name:

N/A

& size of specimens:

N/A

Collection location:

N/A

☐ Whole Organism ☐ Partial Organism

9b. What will be done with the specimens after the project has ended?

N/A

9c. Will the organisms be kept alive after collection? ☐ Yes ☐ No

N/A

• General site/location for collections:

N/A

• Is it an open or closed system? ☐ Open ☐ Closed

N/A

• Is there an outfall? ☐ Yes ☐ No

N/A

• Will these organisms be housed with other organisms? If so, what are the other organisms?

N/A

• Will organisms be released?

N/A

10. If applicable, how will the collected samples or specimens be transported out of the Monument?

N/A

11. Describe collaborative activities to share samples, reduce duplicative sampling, or duplicative research:

N/A

12a. List all specialized gear and materials to be used in this activity:

4 EARs each consists of a 4.5" diameter x 2-1/4' aluminum cylindrical housing.
4 syntactic foam floats one for each EAR.
4 acoustic releases each consists of a 4" diameter x 1.5' aluminum cylindrical housing.
4 garage post anchoring cement blocks and 8 sandbags.
scuba gear including mask, fins, air tanks.
replacement battery pack to refurbish 8 shallow EARs

12b. List all Hazardous Materials you propose to take to and use within the Monument:

N/A

13. Describe any fixed installations and instrumentation proposed to be set in the Monument:

Each of the 8 shallow EARs are already attached to cement anchoring blocks. The EARs will be disconnected from the anchoring blocks and brought to the ship and batteries will be swapped out.

14. Provide a time line for sample analysis, data analysis, write-up and publication of information:

We expect data analysis to be mostly complete in 2010-2012, and analysis of specimens is ongoing. Data analysis and write-up usually take no more than an additional year, although the turn-around time for some journals can exceed 300 days, so time to publication can still be considerable post-submission of the study.

Results from these studies are made available to Monument, FWS, and state managers as quickly as possible. Brown-bag luncheons at HIMB allow researchers to highlight important or interesting new results and discuss them with the management personnel. In addition, we hold biannual symposia during which researchers present the most current findings from their ongoing research in the Monument. These efforts ensure that research results are provided to the Monument co-trustees as quickly as they become available.

15. List all Applicants' publications directly related to the proposed project:

•Lammers, M.O., Brainard, R.E. and Au, W.W.L (2006). "Diel trends in the mesopelagic biomass community of the Northwestern Hawaiian Islands observed acoustically". Atoll Research Bulletin, 543:391-407.

- Lammers, M.O., Brainard, R.E. and Au, W.W.L., Mooney, T.A. and Wong K. (2008). “An Ecological Acoustic Recorder (EAR) for long-term monitoring of biological and anthropogenic sounds on coral reefs and other marine habitats.” J. Acoust. Soc. Am. 123:1720-1728
- Lammers, M.O., Stieb, S., Au, W.W.L., Mooney, T.A., Brainard, R.E. and Wong, K. (In prep). “Temporal, geographic and density variations in the acoustic activity of snapping shrimp.” To be submitted to Mar. Ecol. Prog. Ser.

With knowledge of the penalties for false or incomplete statements, as provided by 18 U.S.C. 1001, and for perjury, as provided by 18 U.S.C. 1621, I hereby certify to the best of my abilities under penalty of perjury of that the information I have provided on this application form is true and correct. I agree that the Co-Trustees may post this application in its entirety on the Internet. I understand that the Co-Trustees will consider deleting all information that I have identified as "confidential" prior to posting the application.

Signature

Date

**SEND ONE SIGNED APPLICATION VIA MAIL TO THE MONUMENT OFFICE
BELOW:**

Papahānaumokuākea Marine National Monument Permit Coordinator
6600 Kalaniana'ole Hwy. # 300
Honolulu, HI 96825
FAX: (808) 397-2662

DID YOU INCLUDE THESE?

- ☒ Applicant CV/Resume/Biography
- ☒ Intended field Principal Investigator CV/Resume/Biography
- ☒ Electronic and Hard Copy of Application with Signature
- ☐ Statement of information you wish to be kept confidential
- ☐ Material Safety Data Sheets for Hazardous Materials

Papahānaumokuākea Marine National Monument Compliance Information Sheet

1. Updated list of personnel to be covered by permit. List all personnel names and their roles here (e.g. John Doe, Diver; Jane Doe, Field Technician, Jerry Doe, Medical Assistant): Anne Rosinski, Field Technician

2. Specific Site Location(s): (Attach copies of specific collection locations): Kure

Kure Atoll:	N28 deg 20.000'	W178 deg 13.000'
Lisianski -Pioneer Bank	N26 deg 2.000'	W173 deg 32.000'
French FS-Brooks Bank	N23 deg 55.000'	W166 deg 42,.000'
Nihoa	N22 deg 54.000'	W162 deg 12.000'
Pearl and Hermes Atoll2	N27.94057	W175.86171
Maro Reef	N25.41957	W170.66913
Lisiansky	N26.10010	W173.99798
KUR-Kure Atoll	N28.38171	W178.32571
MID-Midway Atoll	N28.19637	W177.37495
French Frigate Shoals2	N23.63507	W166.18554
French Frigate Shoals3	N23.76887	W166.26197
Pearl and Hermes Atoll1	N27.79096	W175.86298

3. Other permits (list and attach documentation of all other related Federal or State permits): None

3a. For each of the permits listed, identify any permit violations or any permit that was suspended, amended, modified or revoked for cause. Explain the circumstances surrounding the violation or permit suspension, amendment, modification or revocation. None

4. Funding sources (Attach copies of your budget, specific to proposed activities under this permit and include funding sources. See instructions for more information): Funding source: NWHI Partnership Program

5. Time frame:

Activity start: May 10th, 2010

Activity completion: June 3rd, 2010

Dates actively inside the Monument:

From: May 11th, 2010

To: June 3rd, 2010

Describe any limiting factors in declaring specific dates of the proposed activity at the time of application: Cruise logistics and weather

Personnel schedule in the Monument: 1

6. Indicate (with attached documentation) what insurance policies, bonding coverage, and/or financial resources are in place to pay for or reimburse the Monument trustees for the necessary search and rescue, evacuation, and/or removal of any or all persons covered by the permit from the Monument: The personnel will be covered by the University of Hawaii's worker's insurance.

7. Check the appropriate box to indicate how personnel will enter the Monument:

☒ Vessel

☐ Aircraft

Provide Vessel and Aircraft information: NOAA ship Hi'ialakai

8. The certifications/inspections (below) must be completed prior to departure for vessels (and associated tenders) entering the Monument. Fill in scheduled date (attach documentation):

☐ Rodent free, Date:

☐ Tender vessel, Date:

☐ Ballast water, Date:

☐ Gear/equipment, Date:

☐ Hull inspection, Date:

9. Vessel information (NOTE: if you are traveling aboard a National Oceanic and Atmospheric Administration vessel, skip this question):

Vessel name: Hi'ialakai

Vessel owner: NOAA

Captain's name:

IMO#:

Vessel ID#:
Flag:
Vessel type:
Call sign:
Embarkation port:
Last port vessel will have been at prior to this embarkation:
Length:
Gross tonnage:
Total ballast water capacity volume (m3):
Total number of ballast water tanks on ship:
Total fuel capacity:
Total number of fuel tanks on ship:
Marine Sanitation Device:
Type:

Explain in detail how you will comply with the regulations regarding discharge in the Monument. Describe in detail. If applicable, attach schematics of the vessel's discharge and treatment systems:

Other fuel/hazardous materials to be carried on board and amounts:

Provide proof of a National Oceanic and Atmospheric Administration (NOAA) Office of Law Enforcement-approved Vessel Monitoring System (VMS). Provide the name and contact information of the contractor responsible for installing the VMS system. Also describe VMS unit name and type:

VMS Email:
Inmarsat ID#:

*** Individuals MUST ENSURE that a type-approved VMS unit is installed and that its automatic position reports are being properly received by the NOAA OLE system prior to the issuance of a permit. To make sure your VMS is properly configured for the NOAA OLE system, please contact NOAA OLE at (808) 203-2503 or (808) 203-2500.**

*** PERMITS WILL NOT BE ISSUED TO INDIVIDUALS ENTERING THE MONUMENT VIA VESSEL UNTIL NOAA OLE HAS CONTACTED THE MONUMENT PERMIT COORDINATOR WITH A 'POSITIVE CHECK' READING.**

10. Tender information:

On what workboats (tenders) will personnel, gear and materials be transported within the Monument? List the number of tenders/skiffs aboard and specific types of motors:

Additional Information for Land Based Operations

11. Proposed movement of personnel, gear, materials, and, if applicable, samples:

12. Room and board requirements on island:

13. Work space needs:

DID YOU INCLUDE THESE?

- ☐ Map(s) or GPS point(s) of Project Location(s), if applicable
- ☐ Funding Proposal(s)
- ☐ Funding and Award Documentation, if already received
- ☐ Documentation of Insurance, if already received
- ☐ Documentation of Inspections
- ☐ Documentation of all required Federal and State Permits or applications for permits